2018-07-04

The Role of Pedagogy in Clinical Education

Tredinnick-Rowe, JF::0000-0002-1154-7410

10.5772/intechopen.74960
InTech

Provisional chapter

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John Tredinnick-Rowe

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Abstract

This chapter introduces the role of pedagogy in the tuition of clinical subjects. After which an overview of the two types of pedagogy that underpin it are explained. Research on the role and function of pedagogy in clinical subjects is in its infancy; as such, different examples of approaches are presented. Specifically, I look at public health, Widening Participation and Public and Patient Involvement (PPI). The chapter will highlight that there is a need for more academic work that investigates the role pedagogy plays in clinical subjects. In short, despite that fact that there is a pressing need in most Western countries to train clinical staff, there is an unfortunate lack of pragmatic texts in all areas of clinical education. By highlighting what publications exist, I hope to instigate discussions about the type of publication and style of approaches that are required for the study of medical pedagogies. Because of the variety of stakeholders involved in medical education, not all will uniformly accept new approaches to pedagogy, causing possible tensions. This chapter covers pedagogies relevant to allied healthcare education. Its content may be of interest to tutors who want to know more about clinical pedagogy and curriculum design.

Keywords: medical education, clinical education, healthcare education, medical pedagogies, Public and Patient Involvement (PPI), public health, Widening Participation (WP)

1. Introduction

This chapter will look at substantive approaches from undergraduate and postgraduate medicine and allied health education from UK curriculums. Here we discuss the role pedagogy plays in these clinical areas. Medical education exists across a continuum, including the core curriculum of undergraduate, post-graduate education, and continuing professional development (CPD) once a doctor qualifies. However, medical students also have to take many

elective units during their education, the inclusion of material drawn from elective courses, and Student Select Units (SSUs) in medical schools is often missed in medical education text, as such, I will provide examples of pedagogies from these areas as well, in an attempt to showcase the different roles pedagogy plays.

One can find texts that connect pedagogy to different clinical areas, for example, nursing [1, 2], which has had a focus on narrative pedagogical strategies [3, 4], but also has been approached from feminist, postmodern, and phenomenological perspective, see Ironside [5]. Equally one can find texts in dentistry that address matters of pedagogy [6], including works in sub-specialities like paediatric dentistry [7, 8]. Other clinical areas that have papers connecting them to pedagogy include social work [9], podiatry [10], and paramedic care [11] amongst others. Across the spectrum of medical subjects, one can find publications connected to pedagogy, which are taught as elective modules like the medical humanities [12] or more quintessentially 'medical' areas such as anatomy [13]. As well as specific techniques used within medical education such as simulated learning [14].

However, one format in which only a few key publications exist, which connects pedagogy with clinical education is the production of textbooks or monographs. This is significant because books provide in-depth and multiple author platforms to debate issues of pedagogy in a way that the length of an academic paper does not permit. Secondly, while research should be encouraged, it is not always obvious how to translate it directly into the actual practices of medical education. Therefore, while there are many research papers that one can read, there is a lack of practically-minded, in-depth monographs that connect clinical areas to pedagogy. Of the texts that exist I would specifically point to the recent work on nursing by Dyson [15]. However, there are also more specialised text like Sataloff [16] who connects pedagogy to the medicine of professional voice care.

Despite the fact that research about pedagogy in clinical areas is not as prevalent an area of academic activity as perhaps it might be (even though works do exist), there are still some reasons to be optimistic about its future. For example, currently the timing and situation is fortuitous, as the regulator of doctors, and nurses, the General Medical Council (GMC) and Nursing and Midwifery Council (NMC) respectively (circa 2017), mandate that doctors and nurses actively participate in CPD activities in order to retain their licences to practice medicine/nursing [17, 18]. Meaning that, presently, there is an imperative for clinical professionals to engage in learning that did not previously exist and this opens up a new opportunity for the subject of clinical pedagogy to gain some relevance.

Also, from 2016 the British government has announced a 25% increase in the number undergraduate medical school places [19]. As such, there is currently a need for clinical tutors and academics to revise and reconsider their curriculums and approaches to pedagogy to accommodate 25% more students. More widely, I was felt that this chapter will be of interest to anyone involved in the development of healthcare professions. Primarily because most education and regulatory developments in other allied healthcare professions are predicated on issues that first occur in medicine.

For the sake of brevity, in this chapter, we will specifically look at some emerging themes and subjects in medical education, including Public and Patient Involvement (PPI), public health

and Widening Participation (WP) as clinical areas that have seen some developments in terms of the pedagogical strategies they employ. Other areas like the growth of simulated learning are also important in medicine, but due to the restrictions in word limits here, I will not go into this issue, see Ziv et al. [20] for more details.

Lastly, this chapter has some international salience. Although the exact approaches for teaching medicine in European and Anglophone countries are different, issues related to how to educate medical students and their interaction with other clinical professions remains broadly the same. Hence, the themes identified here will speak to issues present in North America, Australasia as well as in Europe and the UK.

2. Rationale for the chapter

While there are several monograph series that draw upon both theoretical and practical issues in medical education [21, 22], the literature on pedagogy is almost exclusively confined to papers in academic journals; there are few book series dedicated to pedagogy in medicine or other clinical areas. Consequently, the author felt that there is a clear need for a book chapter to examine current issues and evidence related to pedagogy in medicine from a more practical standpoint. In this chapter, then, I aim to present the works of those who have attempted to construct evidence-based pedagogies in clinical areas. Also, to present some of the literature as it exists for readers and to signpost them to particular areas of interest. I collected this body of literature by drawing from purposive sampling techniques. According to Sparkes and Smith ([23]: p. 70) "sampling in qualitative research is best described as purposive or purposeful in which an attempt is made to gain as much knowledge as possible". Purposeful sampling involves the selection of data "from which one can learn a great deal about issues of central importance to the purpose of the inquiry" ([24]: p. 230).

The need to develop pedagogy within medical education to facilitate changes in the way medicine is taught has been clearly identified. For example, the Lancet Commission in their report on medical education opined that medical school curricula were currently not fit to meet societal demands, and were "outdated and static" [25]. Developments in the pedagogy of clinical subjects can help to create the medical schools (and so curricula) fit for the twenty-first century [26], through the dissemination of evidence-based pedagogies for instruction, for which there is clearly a demand both in terms of societal pressure and but also regulatory requirement. One of the key features of pedagogy's function within clinical subjects is that they can be co-produced with patient partners or with input from the public perspective, or from other clinical professionals [27–29]. However, medical educators perpetually have to be cognizant that their work and its content adheres to the stipulations of the General Medical Council, Medical Schools Council, the Anatomical Society and the College of Paramedics etc. who have a role in determining what the clinical students are taught. It is important in medicine and allied healthcare professions that pedagogies be developed in a highly inclusive manner and that are representative of a variety of stakeholders in medical and health professions education [30]. I hope to shine some light on these points in this chapter.

3. Types of pedagogy in clinical education

There are essentially two different investigative positions one can employ to analyse pedagogy in relation to curriculum design and teaching methodologies within the environments of medical schools. That is to say, we can look at the variance of pedagogical strategies between subjects, or within subjects themselves. In a very basic manner, one can simplify these areas down to the following binary set:

1. Pedagogies of individual subjects taught as part of a curriculum or elective
    a. Example: Pedagogies for Teaching Anatomy
2. Pedagogies of topics or themes taught across clinical or medical curriculums
    a. Example: Pedagogies for teaching gendered issues in medicine

Included within these two categories are both the traditional subjects that students will have to learn which will typically draw upon standard pedagogical formats, lectures, group work etc. However, this dyad also reflects subjects that medical schools are currently adapting to incorporate. I.e. the themes are driven by innovations in medical schools to produce the doctors of the future [26]. For example, the increasing role of patient centred medicine, the increasing use of technology in the teaching of MOOCs, or other online/distant teaching platforms, in addition to mobile applications and E-health, i.e. health technology methodologies. This is why the division between subject and theme when providing an overview of a discipline is useful, as it shows not just what exists but also the struggle institutions face in adapting to new disruptive technologies [31] and so societal pressures.

3.1. Individual subjects

A variety of medical education texts exist that cover both generic subject areas, such as Understanding Medical Education—Evidence, Theory and Practice [21] or the Routledge International Handbook of Medical Education by Bin Abdulrahman, Mennin [32]. However, fewer books exist on subject-specific areas of medicine, for example, *Medical Physiology: Principles for Clinical Medicine* by Rhoades and Bell [33]. While a useful repository of medical knowledge for trainee or practising doctors about physiology, it does not offer new methods for teaching the subject or development of new material from within the subject itself. Consequently, as already iterated, while there are many papers on individual subjects there does seem to be space to explore new and innovative areas of medical pedagogy in book-format.

3.2. Thematic texts

In addition to pedagogical strategies that focus on individual areas of the curriculum, one could focus on themes that might emerge in several areas across a curriculum. For example, introducing social justice concerns, ethics or gender-related issues in medicine. Given the political and social environment within which medicine and medical education function, it is to be expected that there is a significant scope for the development of pedagogical strategies across thematic areas.

Moreover, there is scope for research about clinical pedagogy to provide a focus on new teaching pedagogies that are present across different areas of medicine, and or other clinical subjects combined, such as simulation [34]. There is also scope for subjects that simply address the use of pedagogical techniques that are less used in medicine, such as the flipped classroom models of teaching [35]. In addition, other cross-curriculum themes that cannot be ignored include: the connection of pedagogy to assessment format within medical schools, the role of reflection, feeding back and feeding forward [36]. In the next section, we will look at some specific examples of how pedagogies have been developed in clinical subjects both in terms of individual subjects but also in thematic areas.

4. Emerging pedagogical perspectives

4.1. Pedagogies in population health

As a discipline public health is concerned with influencing and understanding health and wellbeing at the level of populations [37]. Given the wide reaching nature of public health practice, it involves more clinical staff than simply doctors, with undergraduate and postgraduate programs producing a multidisciplinary workforce including nurses, dentists, carers, aid workers, biostatisticians and epidemiologists amongst others.

Literature exists that gives an overview of population health such as Young [38], however like many, Young investigates the subject from a quantitative, epidemiological perspective. There is a distinct lack of literature that connects the qualitative aspect of education (including pedagogy) to public health, primarily qualitative works on public health are based in a social science approach [39], that contextualise populations health issue in relation to a societal issue, for example, *Public Health and Social Justice* by Donohoe [40].

In recent years, the subject discipline has risen to prominence, but there has not been a concurrent increase in the teaching of the subject within medical schools. Therefore, it remains under-researched in terms of developing an evidence-based pedagogic strategy for teaching the subject. In addition, the teachers of the subject can be under-resourced in terms of the literature from which they can draw to successfully engage students.

One of the most practical ways to expose medical students to public and population health is to engage them with community health initiatives, especially disadvantaged or marginalised communities. I recognise, however, that public engagement happens across a spectrum, as Ellaway et al. [41] has highlighted:

1. "Community-based medical education that takes place in traditional academic settings.
2. Public health engagement that involves teaching in community settings, but does not involve the community in its design or any other activity.
3. Community-based public health education that directly involves directly members of a community in the design, conduct, and evaluation of engagement, and meets the needs of the community as well as the students"

Although population health is a more recent addition to medical school curriculums and there is only a sparse literature of pedagogical methods used in the subject area. One can see that each of these three levels represents a different pedagogical strategy across the continuum of medical education. Moreover, they have the potential to become bespoke pedagogies in their own right, depending on the level of engagement a course uses. One of the main vehicles for the development of pedagogical innovations in this area is the Public Health Educators in Medical Schools (PHEMS) network, see Vyas, Rodrigues [42].

The PHEMS network, in partnership with the Faculty of Public Health, has identified the core public health content knowledge to be achieved by any UK medical graduate, irrespective of curriculum design [43, 44]. This learning, of course, must be mapped to the General Medical Council's 2015 document *Outcomes for Graduates* [45] and be in accordance with the Faculty of Public Health's conceptions of the subject discipline. Within this framework, I feel that that the works of the PHEMS network can highlight public health topics and pedagogical suggestions for tutors to further the integration of population health teaching within medical education.

PHEMS have devised four innovative pedagogical approaches for engaging medical students in public health. These are (1) social accountability and community engagement, (2) making the course clinically relevant, (3) sticking to a core content, and recognising that assessment drives learning, and (4) use technology-enhanced learning [42]. Highlighting these four pedagogic approaches will help healthcare systems support the inclusion of population and public health in their curriculums. I would suggest that this is a good example of how collaborative working in an emerging subject within medical schools can start to form a consensus about the best pedagogical strategies for teaching a discipline.

Looking at innovative approaches for engaging medical students on the subjects of population and public health. One can see that through dialogue with like-minded professional and mediation/support of a professional body, subject areas can start to come to a consensus on the best approaches to pedagogy within their discipline.

4.2. Pedagogies for Widening Participation in medicine

Widening Participation (WP) is the process through which students from under-represented groups, be it in relation to gender, age, ethnicity, sexuality or another protected characteristic are facilitated to study medicine [46, 47]. Medical unions such as the British Medical Association support this position:

"Doctors should be as representative as possible of the society they serve in order to provide the best possible care to the UK population" [48].

However, also the Medical Schools Council [49], and the General Medical Council [50], and NHS Health Education England has a Widening Participation programme and a Talent for Care strategy, which it uses to promote the WP agenda. More specifically, NHS Health Education England has four specific pre-employment programmes:

- Project SEARCH
- Princes Trust
- Inspiring Futures
- Brightside Charity

While also running work experience programmes with schools, an integrated apprenticeship scheme—different aspects of healthcare, careers days/fayres, healthcare experience programmes, preparation for work and employability courses. As such, it is fair to say the WP agenda is extensive in medicine, and many different strategies are used to engage people with it.

Consequently, there is currently a drive within the profession and government to help widen participation in medicine and enhance social mobility. We are also entering a recruitment crisis in healthcare [51, 52]. The government is currently funding an increase in medical school places and is prioritising applications that specifically address Widening Participation. For these reasons, it can be argued that the sharing of pedagogical practice and expertise is a much-needed area in relation to WP in medicine.

Medicine and dentistry specifically as a way to widen participation use 1-year pre-medical gateway courses, that students might take to enter medicine if they have not met the specific requirements for directly entering a degree programme [53]. Some universities such as the University of Birmingham accept up to 10% of each year's cohort from Widening Participation schemes [54]. Particular pedagogical approaches are used for students on gateway schemes, but also when they are mixed in with other students in their undergraduate years.

Widening Participation is not just an activity that happens in universities however, Widening Participation initiatives begin at the selection stages for those applying to medical schools, and in the schools themselves. However, much activity in terms of aspiration building, raising academic attainment, career planning and developments occurs in primary and secondary education in terms of WP long before a student applies to medical school. Schools will design pathways for learning specifically for those students who want to study medicine, as well as for those who enter specialist medical and healthcare studio schools.[1] It is key if we are going to create a more diverse workforce in medicine to encourage students at these younger ages, to consider a career as a doctor as a real option. Research has shown that inclusive pedagogies should be sensitive to the complexities of diversity, and the ways in which teachers' and students' identities might influence academic engagement [55].

From a UK perspective, some of the key networks for the development of pedagogy are the Northern Admissions Network of Medical Schools (NAMNS) and the National Widening Participation Group in Medicine, which is run by medical school leads for Widening Participation in the UK. This group aims to promote best practice in Widening Participation in UK medical schools, and to act as a problem-solving forum for WP leads.

[1]These are specialist schools and colleges that prep students to gain entry to medical school.

Despite the presence of the WP agenda in all medical schools and schemes to promote it, there is not a rigorous evidence-based approach to implementing these initiatives. Frequently approaches are simply seen as a form of community engagement; thought is not often given to the pedagogy or the best way in which we might help different groups access medical education, or how the selection process to universities might disenfranchise certain groups. As was the case for pedagogic textbooks in public health, currently, there are no monographs concerning Widening Participation in medicine, let alone from a pedagogical perspective. As far as the author is aware. If one wants to learn about WP in medicine, you may find single chapters in more broadly themed books about WP in Higher Education, such as ' The right to Higher Education: Beyond Widening Participation' by Penny Jane Burke, and Fuller, Heath [56], and then attempt to apply its lessons to medicine or a healthcare related subject. Further work needs to be done, I feel, in this highly important area.

4.3. Pedagogies of patient and public involvement

A thematic area that cuts across all clinical disciplines is the role that patients plays in the education of students. Naturally, the focus of the different caring professions is the same, to help patients, and consequently patient-interaction features regularly within the education of nurses, doctors, dentists, etc. What has been less prevalent is a debate about the best and most appropriate ways to work with and for patients from a pedagogical perspective, in what is known as Patient and Public Involvement (PPI) [57].

Rees et al. [58] describes Patient and Public Involvement in medical education as the *condiciones sine quibus non* of a quality education in medicine and the clinical professions more widely. The idea of a partnership between the patient, public and clinician has been echoed by many in medical education from clinical and non-clinical researchers [59], patients themselves and the General Medical Council as a medical regulator [45]. The PPI agenda is also present in a variety of other clinical areas outside of medicine such as health service research, but also health and social care, see Hayes et al. [60]. It is also worth noting the patient involvement in medical education happens both in the core modules for students but also in their elective courses.

But yet, as Towle et al. [61] highlights in their review of PPI literature, there remains a lack of theory, application and evaluation of PPI schemes. It has also been noted from a pedagogic perspective, by critics of PPI in its current state that students often learn about patient-centred medicine from other doctors rather than from patients themselves [58, 62]. Once more, there is a clear need for a publication that connects pedagogy and PPI. I also feel PPI is often treated as a monolithic subject area, even though it involves a variety of ontologically distinct roles. For example, patients, the public at large, patient representatives and lay representative occupy different roles within PPI, as well as being heterogeneous in their own right. In short, there is no typical patient. The specificity of these roles needs to be accounted for, and tailored to individual situations when developing pedagogy if it is to be fit for purpose. This issue in itself I feel is further justification for the need for additional work on the subject:

"Rather than attempting to simplify these matters, however, we would argue that ambiguity and complexity in PPI is precisely why medical education should demand more consideration of ontological and epistemological matters in PPI scholarship and research." ([63]: p. 85).

Efforts to increase the patient voice in medical education are also occurring in other Western nations; PPI is an agenda that is profligate throughout the Anglosphere and in Western Europe. This is particularly the case in Canada—see the case studies in Spencer et al. [64]. Consequently, medical education, policy and legislation about PPI are generalizable across many Anglophone countries. It is built chiefly around an evidence base and legislation in the UK, Canada and Australia. Patient and public involvement is paramount for doctors from the beginning of their training but also throughout the entire duration of their clinical practice. Previously, publications have highlighted this:

"the field of medical education could have much to gain from crossing the boundaries between those seemingly different spheres and developing a cogent, context-specific approach to embedding PPI as both formal education and education-through regulation for all medical professionals." ([63]: p. 80).

Currently there are a small number of books that relate to PPI in medicine, but they tend to be confined to very specific areas of medicine or health, such as: health technology assessment [65], a critique of the underlying philosophy of PPI [66], a comparison between European nations policies on PPI [67]. Narrative stories of PPI in palliative care [68], and PPI in the commissioning of Primary Care Trusts [69] etc. As this list details, the books currently in circulation about PPI relate to niche areas, like health technology assessment for example. While publications exist in related topics, such as patient-centered medicine, there are no generic works on PPI in monograph format, and more specifically, no books exist with an explicit focus on PPI from a pedagogical perspective. Which has emerged, as a recurrent theme throughout this chapter, there is space for a pragmatic text on the role and function of pedagogies in PPI.

Frequently books on PPI state that their objectives are to empower patients through publishing accounts of their participation in medical services design or education. As such, many books like Rhodes and Small [68] are a collection of narratives from the patient perspective. I find such collections worthy, but they are categorically distinct from works that connect PPI to pedagogy.

The different pedagogical approaches to PPI can then be broken down into three different areas, in relation to the different needs that they serve: societal need, regulatory need and educational need, for example.

4.3.1. Societal need

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There is a societal need for patient's voices to be heard in medicine so that patients can become an active participant in the design of medical education and clinical services. This is also a thoroughly modern way of working, that accounts for patient needs, as Sullivan ([70]: p. 1595) stated:

"The physicians' job description will be changed to focus on patients' lives rather than patients' bodies."

Further to this, there is also a need for hard to reach sections of society, such as LGBTQI+, military veterans and disabled groups to be more fully represented in clinical education systems. Fundamentally, I believe that pedagogies for patient-centered medicine and PPI need to have their genesis in collaboration and partnership if they are to meet societal needs. I.e.

where patients, lay representatives, students, doctors, and researchers work in collaboration, this helps to produce pedagogies that reflect the needs of wider societal groups, and not ones simply formed by doctors or academics in isolation.

4.3.2. Regulatory need

The GMC as a medical regulator is pushing for more patient-centered medicine and patient engagement—see GMC [45], GMC [71], GMC [72]. Although there is only scant PPI literature in relation to its role in UK regulation [73]. It is essential that medical educators comprehend the perspectives and wishes of medical regulator's priorities for patient involvement in medical education.

4.3.3. Educational need

Effective educational strategies for engaging medical students with patients and members of the public in medicine and medical assessment has been an aspiration in medicine for a long time. However, this agenda was diminished in the twentieth century due to the rise in popularity of statistics and biomedical technology in medicine, replacing opportunities for patient contact. Prior to this medical reformer, William Osler in 1905 wrote:

"for the junior student in medicine and surgery, it is a safe rule to have no teaching without a patient for a text, and the best teaching is that taught by the patient himself" ([74]: p. 332).

There is still a need for tutors and other staff to increase patient and public involvement in their student's education. We would also point to the Soar and Ryan ([75]: p. 80) who commented:

"The General Medical Council recently issued advice about patient and public involvement in all areas of medical education, including curricular design, but it is not immediately clear how this should be incorporated."

Steps need to be taken so that we can more clearly explain how PPI can be used in curriculum design and clinical teaching more widely, for which there is clearly an educational need and a regulatory agenda. In 2018, the problem remains, how do we progress from aspiration to delivery of a truly patient-centred form of medical education? More specifically how can we provide a variety of PPI solutions, both bespoke and generic that other PPI stakeholders can replicate or ruminate upon? Medical educators recognise that medical education is a spectrum (undergraduate, post-graduate and continuing professional development); consequently, the development of a pedagogy of PPI in medical education must also reflect this.

5. Discussion

The different approaches to pedagogies given in this chapter hang together as a cohesive whole rather than as separate individual approaches. This is because the unifying theme amongst approaches is that they aim towards increasing the patient-centeredness of medicine, patient benefits, and the role and voice of the public in medical education. I agree with the World Health

Organisation that medical schools need to be more accountable, and have obligations to the health concerns of the communities that they serve [76, 77]. I feel that this aim is reflected in the different areas of pedagogy that I have presented in this chapter. For example, the pedagogies used in Widening Participation activities in medical schools are designed to create a medical workforce that is more receptive to all the needs of patients regardless of age, gender, sexuality and income. Pedagogies used to disseminate health technologies highlight how the dissemination of health technologies to clinical professions and patients through apps, mobile solutions and distance learning not only democratises medical knowledge, but also personalises the pedagogical approaches to education, and leads to its diffusion globally [78]. Pedagogies used to teach population health talk speak to how the subject is being reformed to be taught as a transformative learning experience, which is cognizant of social justice concerns, and social accountability [42]. Lastly, the pedagogies used to further Patient and Public Involvement in medicine directly informs clinical tutors and others how to involve patients in all areas of medical education.

However, co-production is not without tensions, for example, not all stakeholders uniformly accepted new approaches to education within medicine, and that differing voices still need to be heard. This position recognises that the interests of students, staff, clinicians, medical schools and their regulators are not always aligned, but all have a role to play in the delivery of effective medical education and ultimately better care for patients. A readily identifiable example of this tension would be the methods used for Widening Participation activities.

Regulators of medical schools have on-going concerns about the use of outcome measures to determine the effectiveness of pedagogical techniques used to teach undergraduate medicine. Such institutions need to understand what are the most beneficial indicators to determine the effectiveness of teaching a subject, while also highlighting the limitations (variance) of indicators that are available. In short, there are difficulties of evaluating medical education pedagogy in terms that are relevant to patient outcomes for WP activities.

As such, while Widening Participation activities must be delivered, there is not always robust psychometric tests that can be used to substantiate the value of the teaching methods in quantitative and ultimately legally defensible terms. Which is not to suggest such activities lack value, but rather the measurement of value that medical institutions and regulators deem as valid and robust cannot easily be accounted for in terms of diversity or issues of social justice, but they are concomitantly expected to engage with such activities nevertheless. Equally, one might also highlight the work of Greenbank ([79]: p. 141) who suggested that WP in Higher Education frequently appears to be "lacking a cohesive, evidence-based rationale". It seems then that the values behind pedagogical exercises and techniques used may at times be at odds with institutions and the data-driven *modus operandi* of academic and regulatory bodies.

6. Conclusions

Looking at the development of the population and public health based pedagogies by the PHEMS group, one of the conclusions of this chapter is that through dialogue with like-minded professionals and support of a professional body, newer clinical subjects can start to come to a consensus on the best approaches to pedagogy within their area.

We can also conclude that there may be instances where because of the variety of stakeholders involved in medical education: patients, public, clinical staff, medical schools, medical regulators etc. not all the stakeholders will uniformly accept new approaches to education within medicine, due to the perceived lack of statistical evidence-base, and this can lead to tensions. As such, teaching approaches in more politically sensitive parts of clinical subjects like Widening Participation may face opposition in certain quarters.

In addition, one can also see that the external policy decisions about medical student numbers and regulatory pressures to increase the patient-centeredness of medicine act as drivers in terms of how tutors approach teaching their classes. As such, in medicine, there are external factors outside the medical school itself that act as drivers for how and which pedagogies are implemented in clinical teaching.

Lastly, the chapter has also highlighted that while research about pedagogy in clinical areas is not as prevalent an area of academic activity as it might be, even though papers on the subject do exist. What is required going forward is the production of textbooks or monographs which provide in-depth long form and multiple platforms to debate issues of pedagogy in a way that academic paper length does not permit.

Conflict of interest

I state that I have no conflicts of interest, and I am not associated with, or a member of an organisation or research clusters covered in this work. The contents of this paper received no funding.

Author details

John Tredinnick-Rowe

Address all correspondence to: john.tredinnick-rowe@plymouth.ac.uk

Faculty of Health and Human Sciences, University of Plymouth, Plymouth, UK

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